



## **DEPARTMENT OF THE INTERIOR**

### **Fish and Wildlife Service**

#### **50 CFR Part 17**

**[Docket No. FWS–R4–ES–2016–0031; 4500030113]**

#### **RIN 1018-BA79**

### **Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Black Warrior Waterdog**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), propose to designate critical habitat for the Black Warrior waterdog (*Necturus alabamensis*) under the Endangered Species Act (Act). In total, approximately 1,073 river kilometers (669 river miles) in Blount, Cullman, Etowah, Fayette, Jefferson, Lawrence, Marshall, Tuscaloosa, Walker, and Winston Counties, Alabama, fall within the boundaries of the proposed critical habitat designation. We also announce the availability of a draft economic analysis (DEA) of the proposed critical habitat designation. Elsewhere in this issue of the **Federal Register**, we propose to list the Black Warrior waterdog as an endangered species under the Act.

**DATES:** We will accept comments received or postmarked on or before [**INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

Comments submitted electronically using the Federal eRulemaking Portal (see

**ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date.

We must receive requests for public hearings, in writing, at the address shown in **FOR FURTHER INFORMATION CONTACT** by [**INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

**ADDRESSES:** You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal:

<http://www.regulations.gov>. In the Search box, enter Docket No. FWS–R4–ES–2016–0031, which is the docket number for this rulemaking. Then, click on the Search button. On the resulting page, in the Search panel on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document. You may submit a comment by clicking on “Comment Now!”

(2) *By hard copy:* Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R4–ES–2016–0031, U.S. Fish and Wildlife Service, MS: BPHC, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments only by the methods described above. We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see **Information Requested**, below, for more information).

*Document availability:* The draft economic analysis is available on the Service’s Web site at <http://www.fws.gov/Daphne>, on the Federal eRulemaking Portal at <http://www.regulations.gov> under Docket No. FWS–R4–ES–2016–0031, and at the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

The coordinates or plot points or both from which the maps are generated are included in the administrative record for this proposed rule and are available on the Service's Web site at <http://www.fws.gov/Daphne>, on the Federal eRulemaking Portal at <http://www.regulations.gov> under Docket No. FWS-R4-ES-2016-0031, and at the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we may develop for this critical habitat designation will also be available at the Service's Web site and Field Office identified above, and may also be available at <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** William Pearson, Field Supervisor, U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office, 1208 Main Street, Daphne, AL 36526; telephone 251-441-5184; or facsimile 251-441-6222. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800-877-8339.

#### **SUPPLEMENTARY INFORMATION:**

##### **Executive Summary**

*Why we need to publish a rule.* Under the Endangered Species Act (Act), if we determine that any species is an endangered or threatened species we must designate critical habitat, to the maximum extent prudent and determinable. Designations and revisions of critical habitat can only be completed by issuing a rule.

*This rule* is a proposed rule to designate critical habitat for the Black Warrior waterdog under the Act.

*The basis for our action.* Section 4(b)(2) of the Act states that the Secretary shall designate critical habitat on the basis of the best available scientific data after taking into

consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

*We prepared an economic analysis of the proposed designation of critical habitat.* We prepared an analysis of the economic impacts of the proposed critical habitat designation and related factors. We hereby announce the availability of the draft economic analysis (DEA) and seek public review and comment.

*We will seek peer review.* We are seeking comments from independent specialists to ensure that our critical habitat proposal is based on scientifically sound data and analyses. Because we will consider all comments and information we receive during the comment period, our final designation may differ from this proposal.

### **Information Requested**

We intend that any final action resulting from this proposed rule will be based on the best scientific data available and be as accurate and as effective as possible.

Therefore, we request comments or information from other concerned government agencies, the scientific community, industry, or any other interested party concerning this proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including whether there are threats to the species from human activity, the degree of which can be expected to

increase due to the designation, and whether that increase in threat outweighs the benefit of designation such that the designation of critical habitat may not be prudent.

(2) Specific information on:

(a) The amount and distribution of Black Warrior waterdog habitat;

(b) What areas, that were occupied at the time of listing (or are currently occupied) and that contain features essential to the conservation of the species, should be included in the designation and why;

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change; and

(d) What areas not occupied at the time of listing are essential for the conservation of the species and why.

(3) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat.

(4) Information on the projected and reasonably likely impacts of climate change on the Black Warrior waterdog and proposed critical habitat.

(5) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation and the benefits of including or excluding areas that exhibit these impacts.

(6) Information on the extent to which the description of economic impacts in the DEA is a reasonable estimate of the likely economic impacts.

(7) The likelihood of adverse social reactions to the designation of critical habitat, as discussed in the associated documents of the DEA, and how the consequences

of such reactions, if likely to occur, would relate to the conservation and regulatory benefits of the proposed critical habitat designation.

(8) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

All comments submitted electronically via <http://www.regulations.gov> will be presented on the Web site in their entirety as submitted. For comments submitted via hard copy, we will post your entire comment—including your personal identifying information—on <http://www.regulations.gov>. You may request at the top of your document that we withhold personal information such as your street address, phone number, or e-mail address from public review; however, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <http://www.regulations.gov>, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

## **Previous Federal Actions**

All previous Federal actions regarding the Black Warrior waterdog are described in the proposal to list the species as an endangered species under the Act, published elsewhere in this issue of the **Federal Register**.

## **Background**

The Black Warrior waterdog is a species of salamander that inhabits, and is endemic to, streams above the fall line in the Black Warrior River Basin (Basin) in Alabama. The Black Warrior waterdog is a large, aquatic, nocturnal salamander that permanently retains a larval form and external gills throughout its life (Conant and Collins 1998, pp. 419–420). The Black Warrior waterdog inhabits the same areas as the flattened musk turtle (*Sternotherus depressus*), a species listed as threatened under the Act (52 FR 22418; June 11, 1987). According to Mount (1981, p. 23), optimal habitat for the flattened musk turtle consists of “segment[s] of a free flowing large creek or small river having the following characteristics: (1) drainage area between 50 and 500 square miles, (2) depth averaging 2 feet, with vegetated shallows alternating with pools at least 3 to 4 feet deep, (3) pools with detectable current, (4) abundance of submerged rocks with crevices, overlapping flat rocks, or accumulations of boulders, (5) abundant molluscan fauna, (6) low silt load and minimal silt deposits, (7) relatively low nutrient content and bacterial count, (8) moderate temperatures (maximum 85 [degrees Fahrenheit (°F)], and (9) minimal pollution by synthetic chemicals and toxic inorganic materials” (Bailey 2014, p. 1). We find that the optimal habitat for the flattened musk turtle, as described by Mount, reflects the optimal habitat for the Black Warrior waterdog with two differences: the Black Warrior waterdog’s prey preference is insect larva instead of molluscan fauna,

and it uses leaf packs (leaves that accumulate in streams and form leaf bundles behind branches, rocks, and other objects) as shelter and foraging habitat.

### **Critical Habitat**

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Our regulations at 50 CFR 424.02 define “geographical area occupied by the species” as an area that may generally be delineated around species’ occurrences, as determined by the Secretary (i.e., range). Such areas may include those areas used throughout all or part of the species’ life cycle, even if not used on a regular basis (e.g., migratory corridors, seasonal habitats, and habitats used periodically, but not solely by vagrant individuals).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law



enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure, in consultation with the Service, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific data available, those physical or

biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical and biological features within an area, we focus on the specific features that support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106-554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our

decisions are based on the best scientific and commercial data available. They require our staff, to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas

may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

#### *Prudency Determination*

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12), require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the designation of critical habitat is not prudent when one or both of the following situations exist:

- (1) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species; or
- (2) designation of critical habitat would not be beneficial to the species. In determining whether a designation would not be beneficial, the factors the Service may consider include, but are not limited to: Whether the present or threatened destruction, modification, or curtailment of a species' habitat or range is not a threat to the species, or whether any areas meet the definition of "critical habitat."

As discussed under *Factor B* in the proposed listing rule, which is published elsewhere in this issue of the **Federal Register**, there is currently no imminent threat of take attributed to collection or vandalism for this species, and identification and mapping of critical habitat is not expected to initiate any such threat. In the absence of finding that

the designation of critical habitat would increase threats to a species, we consider whether such designation of critical habitat would not be beneficial to the species. As discussed in our proposed listing rule, we determined that the present or threatened destruction, modification, or curtailment of a species' habitat or range is a threat to the Black Warrior waterdog. We have also identified, in this proposed rule, areas that meet the definition of critical habitat.

Therefore, because we have determined that the designation of critical habitat will not likely increase the degree of threat to the species and would be beneficial, we find that designation of critical habitat is prudent for the Black Warrior waterdog.

#### *Critical Habitat Determinability*

Having determined that designation is prudent, under section 4(a)(3) of the Act we must find whether critical habitat for the Black Warrior waterdog is determinable. Our regulations at 50 CFR 424.12(a)(2) state that critical habitat is not determinable when one or both of the following situations exist:

- (i) Information sufficient to perform required analyses of the impacts of the designation is lacking, or
- (ii) The biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat.

We reviewed the available information pertaining to the biological needs of the species and habitat characteristics where this species is located. We have determined that this information is sufficient for us to analyze the impacts of designation, and includes sufficient information about the biological needs of the Black Warrior waterdog to allow

us to identify areas for inclusion in critical habitat. Therefore, we conclude that critical habitat is determinable for the Black Warrior waterdog.

### **Physical or Biological Features**

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features that are essential to the conservation of the species and which may require special management considerations or protection. We define “physical or biological features” at 50 CFR 424.02 as: “The features that support the life-history needs of the species, including but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic, or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity.”

These include, but are not limited to:

- (1) Space for individual and population growth and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, or rearing (or development) of offspring; and
- (5) Habitats that are protected from disturbance or are representative of the historical, geographical and ecological distributions of a species.

We derive the specific physical or biological features essential for Black Warrior waterdog from studies of this species' habitat, ecology, and life history as described below. We have determined that the following physical or biological features are essential for Black Warrior waterdog.

*Space for Individual and Population Growth and for Normal Behavior*

The Black Warrior waterdog is found in the Black Warrior Basin above the fall line (rocky habitat with little sand). According to Mount (1981, p. 23), the Black Warrior waterdog's optimal habitat consists of a "segment of a free flowing large creek or small river having the following characteristics: (1) drainage area between 50 and 500 square miles, (2) depth averaging two feet, with vegetated shallows alternating with pools at least three to four feet deep, (3) pools with detectable current, (4) abundance of submerged rocks with crevices, overlapping flat rocks, or accumulations of boulders, (5) abundant molluscan fauna, (6) low silt load and minimal silt deposits, (7) relatively low nutrient content and bacterial count, (8) moderate temperatures (maximum 85 °F), and (9) minimal pollution by synthetic chemicals and toxic inorganic materials." The Black Warrior waterdog finds refuge under boulders or rocks and in crevices, lays its eggs on the underside of boulders, feeds on insect larva, and has permeable skin.

Because much is unknown about the spatial habitat requirements of the Black Warrior waterdog, we considered the Neuse River waterdog (*Necturus lewisi*), a closely related species that occurs in the North Carolina piedmont plateau region, as a surrogate species. The Neuse River waterdog inhabits similar microhabitat, has similar feeding requirements, and occurs in the Piedmont plateau region. The tributaries of the Neuse River are characterized with gradients similar to the habitat found in the Black Warrior

River Basin. According to Ashton (1985, pp. 103-104), adult and juvenile Neuse River waterdogs utilize microhabitats characterized by moderate stream flow and relatively high dissolved oxygen concentrations, which is consistent with other *Necturus* species found in southern States. Studies of the Neuse River waterdog indicate that adult waterdogs utilize areas with large bedrock outcrops, large boulders with sandy-gravel bottoms, and stream banks with rock outcroppings.

We note that although the Gulf Coast waterdog (*Necturus beyeri*) is also found in the Black Warrior Basin, we did not consider the species as a surrogate for the Black Warrior waterdog because it utilizes a different microhabitat; the Gulf Coast waterdog is usually found below the fall line (sandy habitat). Streams utilized by the Gulf Coast waterdog usually have sandy substrate, flow through flatter terrain, and have broader flood plains than the Black Warrior waterdog's habitat.

Therefore, based on the information above, we identify geomorphically stable streams with substrate consisting of clay or bedrock with little sand, and containing abundant rock crevices, rock slabs, and leaf packs to be essential physical or biological features for the Black Warrior waterdog. The connectivity of these stream microhabitats is essential in accommodating growth and other normal behaviors of the Black Warrior waterdog and in promoting gene flow within the species.

#### *Food, Water, Air, Light, Minerals, or Other Nutritional or Physiological Requirements*

##### **Food**

Feeding habits of the Black Warrior waterdog are unknown but are likely similar to the feeding habits of Neuse River waterdog. Both adult and juvenile Neuse River waterdogs appear to be opportunistic feeders. Braswell and Ashton (1985 pp., 22-27)



found that larval waterdog diets consist primarily of a variety of aquatic arthropods (*Ostracoda*, *Copepoda*, *Isopoda*, and *Amphipoda*) with some insect larvae (*Odonata*, *Ephemeroptera*, *Plecoptera*, *Trichoptera*, *Diptera*, and *Coleoptera*). The adult waterdog diet was more expansive than the juvenile diet and included aquatic arthropods, other aquatic and terrestrial invertebrates (earthworms, centipedes, beetles, grubs), and aquatic and terrestrial vertebrates (fish and salamanders) (Braswell and Ashton 1985, pp. 13, 24–25).

Since aquatic invertebrates are an important component of the Black Warrior waterdog's diet—specifically, the prey base of aquatic arthropods, insect larvae (*Odonata*, *Ephemeroptera*, *Plecoptera*, *Trichoptera*, *Diptera*, and *Coleoptera*), aquatic and terrestrial invertebrates, and aquatic and terrestrial vertebrates—it is essential to also take into consideration the aquatic insects' specific habitat requirements. Merrit and Cummins (1996) described caddisfly and mayfly habitat as a wide variety of standing and flowing water habitats, with the greatest diversity being found in rocky-bottom streams with an abundance of oxygen. As a result, they further identify the food sources as a variety of detritus (leaf packs), algae, diatoms, and macrophytes for the aquatic insects.

Water

As little is known about the specific water quality needs of the Black Warrior waterdog, we evaluated and based the water quality parameters on various factors, specifically Mount's description of optimal habitat, Neuse River waterdog literature, prey species requirements (insect larva), Alabama Department of Environmental Management (ADEM) water quality standards, and water quality requirements for currently listed aquatic species found in the Basin, as follows: rush darter (*Etheostoma phytophilum*),

Alabama moccasinshell (*Medionidus acutissimus*), dark pigtoe (*Pleurobema furvum*), orangenacre mucket (*Lampsilis perovalis*), ovate clubshell (*Pleurobema perovatum*), triangular kidneyshell (*Ptychobranhus greenii*), upland combshell (*Epioblasma metastriata*), and southern acornshell (*Epioblasma othcaloogensis*).

Appropriate water quality parameters to support the Black Warrior waterdog's primary prey base and other listed species in the Basin include:

- Water that lacks harmful levels of pollutants, including inorganic contaminants such as copper, arsenic, mercury, and cadmium; organic contaminants such as human and animal waste products; endocrine-disrupting chemicals; pesticides; nitrogen, potassium, and phosphorus fertilizers; and petroleum distillates (ADEM 2014, pp. 12–15);
- Water temperature not exceeding 85 °F;
- Dissolved oxygen 5.5 milligrams per liter (mg/L) or greater;
- Turbidity of an average monthly reading of 15 nephelometric turbidity units (NTUs; units to measure sediment discharge) above background readings;
- 115 mg/L of total suspended solids (TSS; measured as mg/L of sediment in water) or less; and
- A specific conductance (ability of water to conduct an electrical current, based on dissolved solids in the water) of no greater than 225 microsiemens (µS) per centimeter at 80 °F (October 10, 2012; 77 FR 61664).

These water quality parameters are very similar to those identified as the primary constituent elements for the rush darter (*Etheostoma phytophilum*) and the Alabama pearlshell (*Margaritifera marrianae*). The Black Warrior waterdog benefits from instream flow with moderate velocity and continuous daily discharge that allows for longitudinal connectivity regimes (the pathway along the entire length of a stream). The benefits are inclusive of both surface runoff and ground water sources and exclusive of flushing flows caused by stormwater runoff.

The Black Warrior waterdog has similar hydrologic requirements as those of the Neuse River waterdog, which are usually found in streams greater than 15 meters (m) (50 feet (ft)) wide and deeper than 100 centimeters (cm) (3 ft), and are not found in streams where water flow ceases under normal summer dry weather conditions (Braswell and Aston 1985, pp. 26-30). However, based on recent environmental deoxyribonucleic acid (eDNA) research, conducted by Godwin (2014, pers. comm.), the Black Warrior waterdog could be utilizing streams as narrow as 4 m (13 ft) wide.

The quality of the chemical and physical environment of the streams in the upper Black Warrior River Basin is essential to the survival of the Black Warrior waterdog. Optimal water quality lacks harmful levels of pollutants, including inorganic contaminants such as copper, arsenic, mercury, and cadmium; organic contaminants such as human and animal waste products; endocrine-disrupting chemicals; pesticides; nitrogen, potassium, and phosphorus fertilizers; and petroleum distillates (ADEM 2014, pp. 13–15). Factors that can potentially alter water quality include droughts and periods of low seasonal flow, precipitation events, nonpoint source runoff, human activities within the watershed, random spills (oil, chemicals, pesticides, fertilizer, etc.), and

unregulated stormwater discharge events. A decrease in water quality and instream flow would correspondingly cause a decline in the major food species for the Black Warrior waterdog. Excessive high water flows can wash away or cover (with sediment) leaf packs that are essential for juvenile and adult waterdog foraging and feeding.

Natural variations of instream flows maintain the stream bottom substrates, providing oxygen and other attributes to various invertebrate life stages. Sedimentation contributes to turbidity of the water and has been shown to reduce photosynthesis in aquatic plants, suffocate aquatic insects, smother aquatic eggs, clog gills, and fill in essential interstitial spaces used by aquatic organisms for spawning and foraging. Sedimentation has been shown to wear away and suffocate periphyton (organisms that live attached to objects underwater) and disrupt aquatic insect communities (Waters 1995, pp. 53–86; Knight and Welch 2004, pp. 132–135).

Therefore, based on the information above, we identify medium to larger streams (typically 4 m (13 ft) wide or greater), containing hard substrate (clay or bedrock with little sand) and abundant rock crevices and rock slabs; cool, clean, flowing water having a dissolved oxygen level of 5.5 mg/L or greater; moderate water velocity; aquatic macroinvertebrate prey items; and leaf packs to be essential physical or biological features for the Black Warrior waterdog.

#### *Cover or Shelter*

Preferred substrates for the Black Warrior waterdog are dominated by clay or bedrock with little sand, and also contain abundant rock crevices and rock slabs for retreats (shelter) and areas for egg laying. Based on capture data, the Black Warrior waterdog utilizes leaf pack for shelter from predators and as foraging areas for prey

species. We identify hard bottom substrate with a combination of boulders, rock slabs, and rock outcrops for shelter and reproduction and leaf packs to be essential physical and biological features for the Black Warrior waterdog.

*Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring*

Little is known about the specific requirements of Black Warrior waterdog's reproduction. Based on Neuse River waterdog research, breeding sites are large bedrock outcrops or large boulders with sand and gravel beneath them (Ashton 1985, p. 95). Data collected from the Cincinnati Zoo show that the Black Warrior waterdog deposits eggs under rock slabs or in rock crevices, and the female guards the eggs. Juvenile Black Warrior waterdogs are often found in leaf packs in the stream.

Sedimentation can be destructive to Black Warrior waterdogs and their habitat when it contains toxicants and is excessive. Bailey (2000, p. 2) reported that Black Warrior waterdogs are virtually in constant contact with the substrate and; therefore, also with any toxic chemicals present. He also reported that juveniles and adults are impacted by the exposure. Further, excessive sedimentation of the crevices and leaf packs removes foraging, feeding, breeding, and retreat areas for the Black Warrior waterdog (Laschet 2014, pers. obs.).

Therefore, based on the information above, we identify medium to larger streams (4 m wide or greater), with hard substrate (clay or bedrock with little sand, also containing abundant rock crevices and rock slabs) and moderate water velocity; aquatic macroinvertebrate prey items; leaf packs; with adequate water, as defined above, quality to be essential physical and biological features for the Black Warrior waterdog.

*Habitats Protected from Disturbance or Representative of the Historical Geographical*

*and Ecological Distributions of the Species*

Currently, there are no areas that are undisturbed or that are representative of the historical geographical and ecological distribution of the species that the Black Warrior waterdog typically inhabits. The Bankhead National Forest is an area that can reveal a glimpse of a representative of the historic geographical and ecological features of the species' habitat, and is currently considered the stronghold of the species. Streams in this area typically consisted of geomorphically stable streams with substrate consisting of clay or bedrock with little sand, and containing abundant rock crevices and rock slabs. These streams also contain cool, clean, flowing water having a dissolved oxygen levels of 5.5 mg/L or higher; moderate water velocity; aquatic macroinvertebrate prey items; leaf packs; and adequate water quality (ADEM 2010, pp. 1-3).

Therefore, based on the habitat found on Bankhead National Forest, we identify medium to larger streams (4 m (13 ft) wide or greater) with hard substrate (clay or bedrock with little sand, also containing abundant rock crevices and rock slabs) to be essential physical and biological features for the Black Warrior waterdog.

In summary, based on the information described above we identify the physical or biological features essential to the conservation of the Black Warrior waterdog consists of a riverine system with habitat to support all life-history stages of the Black Warrior waterdog, which consists of the following components:

1. Geomorphically stable, medium to large streams (typically 4 m (13 ft) wide or greater) with:
  - a. Substrate consisting of clay or bedrock with little sand, and containing abundant rock crevices, rock slabs, and leaf packs;
  - b. Moderate water velocity; and

- c. Prey base of aquatic macroinvertebrates.
- 2. Water that lacks harmful levels of pollutants, including inorganic contaminants such as copper, arsenic, mercury, and cadmium; organic contaminants such as human and animal waste products; endocrine-disrupting chemicals; pesticides; nitrogen, potassium, and phosphorus fertilizers; and petroleum distillates.
- 3. Appropriate water quality parameters to support Black Warrior waterdog and primary prey base, including:
  - a. Water temperature not exceeding 85° F;
  - b. Dissolved oxygen 5.5 mg/L or greater;
  - c. Turbidity of an average monthly reading of 15 NTUs above background readings;
  - d. 115 mg/L of total suspended solids or less; and
  - e. A specific conductance of no greater than 225 µS per centimeter at 80 °F.

### **Special Management Considerations or Protection**

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection.

The features essential to the conservation of the Black Warrior waterdog may require special management considerations or protections to reduce the following threats:

(1) Urbanization activities and inadequate stormwater management (such as stream

channel modification for flood control or gravel extraction) that could cause an increase in bank erosion; (2) significant changes in the existing flow regime within the streams due to water diversion or withdrawal; (3) significant alteration of water quality; (4) significant alteration in quantity of groundwater, prevention of water percolating into the aquifer recharge zone, and alteration of spring discharge sites; (5) significant changes in stream bed material composition and quality due to changes in stream flow characteristics, construction projects, and maintenance activities; (6) off-road vehicle use; (7) sewer, gas, and water easements; (8) bridge construction; (9) culvert and pipe installation; and (10) other watershed and floodplain disturbances that release sediments or nutrients into the water.

Management activities that could ameliorate these threats include, but are not limited to: Use of best management practices (BMPs) designed to reduce sedimentation, erosion, and bank side destruction; select harvest of trees along banks, and leaving 50 percent canopy cover (of deciduous trees) along banks; moderation of surface and ground water withdrawals to maintain natural flow regimes; increased use of stormwater management and reduction of stormwater flows into the systems; preservation of headwater springs, and spring runs; regulation of off-road vehicle use; and reduction of other watershed and floodplain disturbances that release sediments, pollutants, or nutrients into the water.

In summary, we find that the occupied areas we are proposing to designate as critical habitat for the Black Warrior waterdog contain the physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. Special management considerations or



protection may be required of the Federal action agency to eliminate, or to reduce to negligible levels, the threats affecting the physical and biological features of each unit. The major threats to the Black Warrior waterdog are sedimentation (loss of habitat), water quality (nutrients, turbidity and toxins), and fragmentation from impoundments.

### **Criteria Used To Identify Critical Habitat**

As required by section 4(b)(2) of the Act, we used the best scientific data available to designate critical habitat. We reviewed available information pertaining to the habitat requirements of the species and surrogates. Based on our review, we are proposing to designate critical habitat in areas within the geographical area occupied by the species at the time of listing (in this case, currently occupied). In accordance with the Act and its implementing regulation at 50 CFR 424.12, we also considered whether designating additional areas—outside those currently occupied—are essential for the conservation of the species. As a result, we also are proposing to designate specific areas outside the geographical area occupied by the Black Warrior waterdog at the time of listing that are within the historical range of the species, but are currently unoccupied, because we have determined that such areas are essential for the conservation of the species.

#### *Areas Occupied at the Time of Listing*

For the purpose of proposing critical habitat for the Black Warrior waterdog, we defined the geographical area currently occupied by the species as required by section 3(5)(A)(i) of the Act. We used information from surveys and reports prepared by the Alabama Department of Conservation and Natural Resources, Alabama Geological Survey, Alabama Natural Heritage Program, Auburn University, Alabama Power

Company, the U.S. Forest Service, the Natural Resources Conservation Service, and the Service to identify the specific locations occupied by the Black Warrior waterdog. Currently, occupied habitat for the species is isolated and limited to four units. Within these four units, the species is located within seven tributaries in the Black Warrior River Basin. Three of the tributaries are on Bankhead National Forest (Winston County) and include Sipsey Fork, Brushy Creek, and Rush Creek. The other four tributaries are Locust Fork; Gurley Creek, which feeds into Locust Fork (Blount and Jefferson Counties); Blackwater/Browns Creek in Winston County; and Yellow Creek in Tuscaloosa County (Godwin 2014). We have determined that these four units (which include all seven tributaries)—Sipsey Fork, Locust Fork, Browns Creek, and Yellow Creek—meet the criteria for designation as critical habitat. As discussed below, some of these units contain all of the identified elements of physical or biological features and support multiple life-history processes. Some units contain only some elements of the physical or biological features necessary to support the Black Warrior waterdog's particular use of that habitat.

#### *Areas Not Occupied at the Time of Listing*

To include areas not occupied by the species at the time of listing in our critical habitat designation, we must demonstrate that these areas are essential to the conservation of the subspecies. To determine if these areas are essential for the conservation of the Black Warrior waterdog, we considered: (1) The importance of the stream to the overall status of the species and the contribution to the future recovery of the Black Warrior waterdog; (2) whether the area could be restored to contain the necessary habitat to support the Black Warrior waterdog; (3) whether the site provides connectivity between

occupied sites for genetic exchange; and (4) whether a population of the species could potentially be reestablished in the area. Lye Branch, Lake Tuscaloosa, Lost Creek, and Mulberry Fork meet these criteria. These areas were formerly occupied by the Black Warrior waterdog and are important in its future recovery, still contain suitable habitat for the species, and can support reestablished populations because they formerly supported the species and continue to support the flattened musk turtle, which has similar habitat requirements as the Black Warrior waterdog. In addition, the Lye Branch unit occurs below the fall line for the Basin, which is a unique location for the Black Warrior waterdog. Due to their separation from the other units, these units have the potential to provide genetic material essential to the recovery of the waterdog.

### **Mapping Black Warrior Waterdog Critical Habitat**

In identifying proposed critical habitat units for the Black Warrior waterdog, we proceeded through a multi-step process. We obtained and reviewed historical records for the Black Warrior waterdog's distribution from Bankhead National Forest and Alabama Natural Heritage, as well as both published and unpublished documentation from our files. Once the historical range was determined, we looked at whether the physical and biological features were present at these historical sites. Then, we reviewed surveys conducted over the last 8 years, including surveys currently being undertaken. We conducted present and absent surveys of known and historical sites and sampled and observed the habitat. Since the Black Warrior waterdog is difficult to detect and capture, we contracted with Alabama Natural Heritage and Auburn University to conduct sampling surveys including the use of eDNA. With the survey results, we confirmed the Black Warrior waterdog's distribution in the Black Warrior River Basin. We determined

occupied areas with data collected from surveys conducted over the last 8 years to present. We considered areas that do not have recent capture or sighting data, but that do have historical records prior to the mid-1990s, to be unoccupied by the species.

Our approach to delineating critical habitat units was applied in the following manner:

(1) We overlaid Black Warrior waterdog locations into a GIS database. This provided us with the ability to examine slope, elevation, geologic type, hydrologic factors, vegetation community, and topographic features. These data points verified the previously recorded elevation ranges for Black Warrior waterdog.

(2) In addition to the GIS layers listed above, we then excluded impoundments and dams as barriers for the species, as described in **Physical or Biological Features**, above.

(3) We then drew critical habitat boundaries that captured the locations as discussed above. The proposed critical habitat designation was then mapped using Projected Coordinate System, NAD 1983 UTM Zone 16N with a Projection of Transverse Mercator.

The proposed critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document in the **Proposed Regulation Promulgation** section. We include more detailed information on the boundaries of the proposed critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on <http://www.regulations.gov> at Docket No. FWS-R4-ES-2016-0031, on the Service's Web site at <http://www.fws.gov/daphne/>, and at the field office responsible

for the designation (see **FOR FURTHER INFORMATION CONTACT**, above).

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the Black Warrior waterdog. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the physical or biological features in the adjacent critical habitat.

### **Proposed Critical Habitat Designation**

We are proposing to designate approximately 1,073 river kilometers (669 river miles) in eight units as critical habitat for the Black Warrior waterdog. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the Black Warrior waterdog. The areas we propose as critical habitat are:

(1) Lye Branch: approximately 16 river kilometers (rkm) (10 river miles (rmi)) of stream and river habitat. The unit consists of the headwaters of Lye Branch to the confluence of Big Sandy Creek.

(2) Lake Tuscaloosa: approximately 108 rkm (67 rmi) of stream and river

habitat. The unit consists of the headwaters of North River to Tuscaloosa Lake, and from the headwaters of Carroll Creek to Tuscaloosa Lake.

(3) Yellow Creek: approximately 30 rkm (19 rmi) of stream and river habitat.

This unit is from the headwaters of Yellow Creek to Holt Lake.

(4) Lost Creek: approximately 93 rkm (58 rmi) of stream and river habitat. This unit is from the headwaters of Lost Creek to Bankhead Lake.

(5) Locust Fork: approximately 391 rkm (243 rmi) of stream and river habitat.

This unit is from the headwaters of Locust Fork to Bankhead Lake, from the headwaters of Slab Creek to the confluence of Locust Fork, from the headwaters of Blackburn Fork to the confluence of Locust Fork, and from the headwaters of Gurley Creek to the confluence of Locust Fork.

(6) Mulberry Fork: approximately 183 rkm (114 rmi) of stream and river habitat.

This unit consists of the headwaters of Mulberry Fork to Bankhead Lake, and from Little Blackwater Creek to the confluence of Blackwater Creek.

(7) Blackwater Creek: approximately 128 rkm (80 rmi) of stream and river habitat. This unit consists of the headwaters of Blackwater Creek to the confluence of Mulberry Fork, from the headwaters of Brown Creek to the confluence of Blackwater Creek.

(8) Sipsey Fork: approximately 124 rkm (78 rmi) of stream and river habitat.

The unit consists of the headwaters of Sipsey Fork to Lewis Smith Lake, from the headwaters of Brushy Creek to Lewis Smith Lake, from the headwaters of Rush Creek to the confluence of Brushy Creek, and from the headwaters of Capsey Creek to the confluence of Brushy Creek.

All of the areas proposed for designation as critical habitat for the Black Warrior waterdog include stream and river channels within the normal high water line.

Table 1 shows the occupancy status of each proposed unit and proposed units that overlap with existing critical habitat units for other federally listed species.

TABLE 1. Occupancy of Black Warrior Waterdog by Proposed Critical Habitat Units and Existing Overlapping Critical Habitat Designation for Federally Listed Species.

Unit	Location	Occupied	Private Ownership rkm/rmi	Federal Ownership rkm/rmi	Existing Critical Habitat rkm/rmi	Total Length rkm/rmi
1	Lye Branch	No	16/10			16/10
2	Lake Tuscaloosa	No	108/67		61/38*	108/67
3	Yellow Creek	Yes	30/19			30/19
4	Lost Creek	No	93/58			93/58
5	Locust Fork	Yes	391/243		101/63**	391/243
6	Mulberry Fork	No	183/114			183/114
7	Blackwater Creek	Yes	128/80			128/80
8	Sipsey Fork	Yes	11/7	113/71	103/64***	124/78

	TOTALS		960/598	113/71	265/165	1,073/669
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\* Alabama moccasinshell (*Medionidus acutissimus*), dark pigtoe (*Pleurobema furvum*), orangenacre mucket (*Lampsilis perovalis*), ovate clubshell (*Pleurobema perovatum*), triangular kidneyshell (*Ptychobranhus greenii*).

\*\* Alabama moccasinshell, dark pigtoe, orangenacre mucket, ovate clubshell, upland combshell (*Epioblasma metastriata*), triangular kidneyshell.

\*\*\* Alabama moccasinshell, dark pigtoe, orangenacre mucket, ovate clubshell, southern acornshell (*Epioblasma othcaloogensis*), triangular kidneyshell.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the Black Warrior waterdog, below. All units are within private ownership, except Unit 8, which also includes Federal ownership.

*Unit 1: Lye Branch, Tuscaloosa County*

Unit 1 includes 16 rkm (10 rmi) of stream and river habitat consisting of the headwaters of Lye Branch to the confluence of Big Sandy Creek, and is below the fall line. This area is not occupied at the time of listing, but is considered essential for the conservation of the species. Based on a literature review by Bailey (2000, p. 1), specimens were historically collected from this area. This location is the only historical site below the fall line, which makes it unique for the species. If any waterdogs still persist in this area, the genetic material would be essential in the recovery of the Black Warrior waterdog. Lye Branch contains leaf litter and instream flow with moderate velocity and continuous daily discharge that allows for a longitudinal connectivity regime. The instream flow consists of both surface runoff and ground water sources,



exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog in that it provides shelter, breeding, and foraging habitat that would allow for reintroduction and recovery activities for the Black Warrior waterdog.

*Unit 2: Lake Tuscaloosa, Fayette and Tuscaloosa Counties, Alabama*

Unit 2 includes 108 rkm (67 rmi) of stream and river habitat. The unit consists of the headwaters of North River to Tuscaloosa Lake, and from the headwaters of Carroll Creek to Tuscaloosa Lake. This area is not occupied at the time of listing, but is considered essential for the conservation of the species. Based on a literature review by Bailey (2000, p. 1), specimens were historically collected from this area. North River and Carroll Creek contain abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for a longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog. This unit would provide habitat for reintroduction and recovery activities of the Black Warrior waterdog.

*Unit 3: Yellow Creek, Tuscaloosa County, Alabama*

Unit 3 includes 30 rkm (19 rmi) of stream and river habitat. The unit consists of the headwaters of Yellow Creek to Holt Lake. This area is occupied at the time of listing (i.e., currently occupied). Godwin (2016, pers. comm.) reported a capture of a Black Warrior waterdog in this area. This area contains the following physical or biological features that are essential for the Black Warrior waterdog: abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for a longitudinal connectivity regime inclusive of both surface

runoff and ground water sources and exclusive of flushing flows caused by stormwater runoff.

Threats to the physical and biological features in proposed Unit 3 that may require special management considerations or protection include:

- Agriculture and silviculture activities, and urbanization activities, that could result in increased bank erosion;
- Significant changes in the existing flow regime due to inadequate stormwater management, water diversion, or water withdrawal;
- Significant alteration of water quality; and
- Significant changes in stream bed material composition and quality as of result of construction projects and maintenance activities; off-road vehicle use; sewer, gas, and water easements; bridge and road construction and maintenance; culvert and pipe installation; and other watershed and floodplain disturbances that release sediments or nutrients into the water.

*Unit 4: Lost Creek, Walker County, Alabama*

Unit 4 includes 93 rkm (58 rmi) of stream and river habitat. The unit consists of headwaters of Lost Creek downstream to Bankhead Lake. This area is unoccupied at the time of listing, but is considered essential for the conservation of the species. Based on a literature review by Bailey (2000, p. 1), Black Warrior waterdogs were historically captured in this area. This area contains abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for

the Black Warrior waterdog. It would provide habitat for reintroduction and recovery activities for the Black Warrior waterdog.

*Unit 5: Locust Fork, Blount, Etowah, Jefferson, and Marshall Counties, Alabama*

Unit 5 includes 391 rkm (243 rmi) of stream and river habitat. The unit consists of the headwaters of Locust Fork to Bankhead Lake, from the headwaters of Slab Creek to the confluence of Locust Fork, from the headwaters of Blackburn Fork to the confluence of Locust Fork, and from the headwaters of Gurley Creek to the confluence of Locust Fork. This area is occupied at the time of listing (i.e., currently occupied). Based on a literature review by Bailey (2000, p. 1), Black Warrior waterdog specimens have been collected from the Locust Fork area. This area contains the following physical or biological features: abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for a longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog.

Threats to the physical and biological features in proposed Unit 5 that may require special management considerations or protection include:

- Agriculture and silviculture activities, and urbanization activities, that could result in increased bank erosion;
- Significant changes in the existing flow regime due to inadequate stormwater management, water diversion, or water withdrawal;
- Significant alteration of water quality; and

- Significant changes in stream bed material composition and quality as of result of construction projects and maintenance activities; off-road vehicle use; sewer, gas, and water easements; bridge and road construction and maintenance; culvert and pipe installation; and other watershed and floodplain disturbances that release sediments or nutrients into the water.

*Unit 6: Mulberry Fork, Blount, Cullman, Marshall, and Walker Counties, Alabama*

Unit 6 includes 183 rkm (114 rmi) of stream and river habitat consisting of the headwaters of Mulberry Fork to Bankhead Lake, and from Little Blackwater Creek to the confluence of Blackwater Creek. This area is not occupied at the time of listing, but is considered essential for the conservation of the species. Based on a literature review by Bailey (2000, p. 1), Black Warrior waterdog specimens were historically collected here. This area contains abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog. This unit would provide habitat for reintroduction and recovery activities of the Black Warrior waterdog.

*Unit 7: Blackwater Creek, Walker and Winston Counties, Alabama*

Unit 7 includes 128 rkm (80 rmi) of stream and river habitat. The unit consists of the headwaters of Blackwater Creek to the confluence of Mulberry Fork, and from the headwaters of Brown Creek to the confluence of Blackwater Creek. This area is occupied at the time of listing based on a literature review by Bailey (2000, p. 1). Godwin (2014, pers. comm.) reported that Black Warrior waterdogs were still present

based on eDNA results. This area contains the following physical or biological features: abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog.

Threats to the physical and biological features in proposed Unit 7 that may require special management considerations or protection include:

- Agriculture and silviculture activities, and urbanization activities, that could result in increased bank erosion;
- Significant changes in the existing flow regime due to inadequate stormwater management, water diversion, or water withdrawal;
- Significant alteration of water quality; and
- Significant changes in stream bed material composition and quality as of result of construction projects and maintenance activities; off-road vehicle use; sewer, gas, and water easements; bridge and road construction and maintenance; culvert and pipe installation; and other watershed and floodplain disturbances that release sediments or nutrients into the water.

*Unit 8: Sipsey Fork, Lawrence and Winston Counties, Alabama*

Unit 8 includes 124 rkm (78 rmi) of stream and river habitat. The unit consists of the headwaters of Sipsey Fork to Lewis Smith Lake, from the headwaters of Brushy Creek to Lewis Smith Lake, from the headwaters of Rush Creek to the confluence of Brushy Creek, and from the headwaters of Capsey Creek to the confluence of Brushy

Creek. This area falls within the boundary of Bankhead National Forest, although some areas are private inholdings.

This area is occupied at the time of listing, based on recent captures (Godwin 2016, pers. comm.). This area contains the following physical or biological features: abundant rock crevices and rock slabs, leaf litter, and instream flow with moderate velocity and continuous daily discharge that allows for longitudinal connectivity regime consisting of both surface runoff and ground water sources, exclusive of flushing flows caused by stormwater runoff, that are essential for the Black Warrior waterdog.

Threats to the physical and biological features in proposed Unit 8 that may require special management considerations or protection include:

- Agriculture and silviculture activities, and urbanization activities, that could result in increased bank erosion;
- Significant changes in the existing flow regime due to inadequate stormwater management, water diversion, or water withdrawal;
- Significant alteration of water quality; and
- Significant changes in stream bed material composition and quality as of result of construction projects and maintenance activities; off-road vehicle use; sewer, gas, and water easements; bridge and road construction and maintenance; culvert and pipe installation; and other watershed and floodplain disturbances that release sediments or nutrients into the water.

## **Effects of Critical Habitat Designation**

### *Section 7 Consultation*

Section 7(a)(2) of the Act requires Federal agencies to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

On February 11, 2016 (81 FR 7214), we published a final rule setting forth a new definition of destruction or adverse modification, which became effective on March 14, 2016. “Destruction or adverse modification” means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from the Service under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation

Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define “reasonable and prudent alternatives” (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency’s legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the Director’s opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.



Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

*Application of the "Adverse Modification" Standard*

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation. Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the Black Warrior waterdog. These activities include, but are not limited to:

(1) Actions that would significantly alter water chemistry or temperature. Such activities could include, but are not limited to, release of chemicals, biological pollutants, or heated effluents into the surface water or connected groundwater at a point source or by dispersed release (non-point source). These activities could alter water conditions to

levels that are beyond the tolerances of the species' prey items and result in direct or cumulative adverse effects to the Black Warrior waterdog and its lifecycle.

(2) Actions that would significantly increase sediment deposition within the stream channel. Such activities could include, but are not limited to, excessive sedimentation from livestock grazing, road construction, channel alteration, timber harvest, off-road vehicle use, and other watershed and floodplain disturbances. These activities could eliminate or reduce the habitat necessary for the growth and reproduction of the Black Warrior waterdog by increasing the sediment deposition to levels that would adversely affect its ability to complete its lifecycle.

(3) Actions that would significantly alter channel morphology or geometry. Such activities could include, but are not limited to, channelization, impoundment, road and bridge construction, mining, dredging, and destruction of riparian vegetation. These activities may lead to changes in water flows and levels that would degrade or eliminate the Black Warrior waterdog and/or its habitat. These actions can also lead to increased sedimentation and degradation in water quality to levels that are beyond the tolerances of the Black Warrior waterdog or its prey items.

## **Exemptions**

### *Application of Section 4(a)(3) of the Act*

Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that: "The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan [INRMP] prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that

such plan provides a benefit to the species for which critical habitat is proposed for designation.” There are no Department of Defense lands with a completed INRMP within the proposed critical habitat designation.

#### **Consideration of Impacts under Section 4(b)(2) of the Act**

Section 4(b)(2) of the Act states that the Secretary shall designate critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute, as well as the legislative history, is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. In this proposed rule, we have not considered any areas for exclusion from critical habitat.

#### **Consideration of Economic Impacts**

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be

the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both “with critical habitat” and “without critical habitat.” The “without critical habitat” scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat (e.g., under the Federal listing as well as other Federal, State, and local regulations). The baseline, therefore, represents the costs of all efforts attributable to the listing of the species under the Act (i.e., conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct an optional 4(b)(2) exclusion analysis.

For this designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the Black Warrior waterdog and draft Waterdog Screening Memorandum,

dated June 30, 2015. The purpose of the screening analysis is to filter out the geographic areas in which the critical habitat designation is unlikely to result in probable incremental economic impacts. In particular, the screening analysis considers baseline costs (i.e., absent critical habitat designation) and includes probable economic impacts where land and water use may be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. The screening analysis filters out particular areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. The screening analysis also assesses whether units are unoccupied by the species and may require additional management or conservation efforts as a result of the critical habitat designation for the species which may incur incremental economic impacts. This screening analysis, combined with the information contained in our IEM, constitutes our draft economic analysis of the proposed critical habitat designation for the Black Warrior waterdog and is summarized in the narrative below.

Executive Orders (E.O.) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with these requirements, our effects analysis may take into consideration impacts to both directly and indirectly impacted entities, where practicable and reasonable. As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. First we identified, in the draft Waterdog Screening Memorandum, probable incremental economic impacts associated with the following

categories of activities: (1) Federal lands management (U.S. Forest Service, U.S. Bureau of Reclamation); (2) roadway and bridge construction; (3) agriculture; (4) grazing; (5) conservation/restoration; (6) instream dams and diversions; (7) storage and distribution of chemical pollutants; (8) dredging; (9) commercial or residential development; (10) timber harvest; (11) recreation (including sport fishing and sportfish stocking, off-road vehicle activity); (12) mining; (13) in-water construction; (14) utilities; (15) water quality; and (16) water quantity/supply. We considered each industry or category individually.

Additionally, we considered whether their activities have any Federal involvement, because critical habitat designation will not affect activities that do not have any Federal involvement; designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the Black Warrior waterdog is present, if the species is listed, then Federal agencies would already be required to consult with the Service under section 7 of the Act on activities they fund, permit, or implement that may affect the species. If we finalize this proposed critical habitat designation, consultations to avoid the destruction or adverse modification of critical habitat would merely be incorporated into that consultation process. Therefore, for occupied and unoccupied habitat disproportionate impacts to any geographic area or sector are not likely as a result of this critical habitat designation.

In our IEM, we attempted to clarify the distinction between the effects that will result from the species being listed and those attributable to the critical habitat designation (i.e., difference between the jeopardy and adverse modification standards) for the Black Warrior waterdog's critical habitat. Because the designation of critical habitat for the Black Warrior waterdog was proposed concurrently with the listing, it has been

our experience that it is more difficult to discern which conservation efforts are attributable to the species being listed and those which will result solely from the designation of critical habitat. However, the following specific circumstances in this case help to inform our evaluation: (1) The essential physical and biological features identified for critical habitat are the same features essential for the life requisites of the species; and (2) any actions that would result in sufficient harm or harassment to constitute jeopardy to the Black Warrior waterdog would also likely adversely affect the essential physical and biological features of critical habitat. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation in turn has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation for the Black Warrior waterdog is likely to result, annually, in less than two formal consultations, 23 informal consultations, and 206 technical assistance efforts related to silviculture, mining, impoundments, commercial and residential development, pipelines, agriculture and other activities that impact water quality. According to the finding in the draft screening analysis, the administrative cost of addressing adverse modification in the consultations will cost between about \$410 to \$9,000 per consultation. The incremental administrative cost is not likely to exceed \$150,000 annually. This designation of critical habitat is not likely to cause more requirements under State or local regulations, nor is the designation expected to have perceptual effects on the markets.

## **Exclusions**

### *Exclusions Based on Economic Impacts*

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. As discussed above, we prepared an analysis of the probable economic impacts of the proposed critical habitat designation and related factors (DEA).

As we stated earlier, we are soliciting data and comments from the public on the DEA, as well as all aspects of the proposed rule and our required determinations. We may revise the proposed rule or supporting documents to incorporate or address information we receive during the public comment period. In particular, we may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

### *Exclusions Based on National Security Impacts*

Under section 4(b)(2) of the Act, we consider whether there are lands within the proposed critical habitat designation where a national security impact might exist. In preparing this proposal, we have determined that the lands within the proposed designation of critical habitat for Black Warrior waterdog are not owned or managed by the Department of Defense or Department of Homeland Security, and, therefore, we anticipate no impact on national security. Consequently, the Secretary does not intend to exercise her discretion to exclude any areas from the final designation based on impacts on national security.



### *Exclusions Based on Other Relevant Impacts*

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security. We consider a number of factors, including whether the landowners have developed any habitat conservation plans (HCPs) or other management plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any tribal issues, and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this proposal, we have determined that there are currently no HCPs or other management plans for the Black Warrior waterdog, and the proposed designation does not include any tribal lands or trust resources. We anticipate no impact on tribal lands, partnerships, or HCPs from this proposed critical habitat designation. Accordingly, the Secretary does not intend to exercise her discretion to exclude any areas from the final designation based on other relevant impacts.

### **Peer Review**

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data and analyses. We have invited these peer reviewers to comment during this public comment period.

We will consider all comments and information we receive during the comment period on this proposed rule during our preparation of a final determination.

Accordingly, the final decision may differ from this proposal.

### **Public Hearings**

Section 4(b)(5) of the Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days after the date of publication of this proposed rule in the **Federal Register** (see **DATES**, above). Such requests must be sent to the address shown in **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the hearing.

### **Required Determinations**

#### *Regulatory Planning and Review (Executive Orders 12866 and 13563)*

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is not significant.

Executive Order 13563 reaffirms the principles of Executive Order 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory

objectives. Executive Order 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

*Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5

million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term “significant economic impact” is meant to apply to a typical small business firm’s business operations.

The Service’s current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself, and, therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that, if adopted, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

For the above reasons and based on currently available information, we certify

that, if adopted, the proposed critical habitat designation would not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

*Energy Supply, Distribution, or Use—Executive Order 13211*

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. We do not expect this proposed designation of critical habitat to significantly affect energy supplies, distribution, or use. Oil and gas pipelines crossing the proposed critical habitat can be buried under the river channel (directional bored) and the contours of the channel bed returned to their natural state. Also, there are existing impoundments for power generation within the Basin but outside the proposed critical habitat. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

*Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following findings:

(1) This rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)-(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or tribal governments” with two exceptions. It excludes “a condition of Federal

assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary

Federal aid program, the Unfunded Mandates Reform Act would not apply, and critical habitat would not shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments because the lands adjacent to the river and streams being proposed for critical habitat are primarily owned by private landowners, which do not fit the description of “small governmental jurisdiction.” Therefore, a Small Government Agency Plan is not required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

*Takings—Executive Order 12630*

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the Black Warrior waterdog in a takings implications assessment. The Act does not authorize the Service to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, nor does it establish any closures or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed

and concludes that this proposed designation of critical habitat for the Black Warrior waterdog would not pose significant takings implications for lands within or affected by the designation.

*Federalism—Executive Order 13132*

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies in Alabama. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, this proposed rule would not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the physical and biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a



Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

*Civil Justice Reform—Executive Order 12988*

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2) of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, the proposed rule identifies the elements of physical or biological features essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed rule provides several options for the interested public to obtain more detailed location information, if desired.

*Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This proposed rule does not contain any new collections of information that require approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule would not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid

OMB control number.

*National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

*Government-to-Government Relationship with Tribes*

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

As discussed above, we have determined that there are no tribal lands that meet the criteria under the Act for inclusion in critical habitat.

### *Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

### **References Cited**

A complete list of references cited in this rulemaking is available on the Internet at <http://www.regulations.gov> and upon request from the Alabama Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

### **Authors**

The primary authors of this proposed rulemaking are the staff members of the Alabama Ecological Services Field Office.

### **List of Subjects in 50 CFR Part 17**

Endangered and threatened species, Exports, Imports, Reporting and

recordkeeping requirements, Transportation.

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

**PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS**

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 1531-1544; and 4201-4245, unless otherwise noted.

2. In § 17.95, amend paragraph (d) by adding an entry for “Black Warrior Waterdog (*Necturus alabamensis*)” immediately following the entry for “Houston Toad (*Bufo houstonensis*)” to read as follows:

**§ 17.95 Critical habitat—fish and wildlife.**

\* \* \* \* \*

(d) *Amphibians.*

\* \* \* \* \*

Black Warrior Waterdog (*Necturus alabamensis*)

- (1) Critical habitat units are depicted for Blount, Cullman, Etowah, Fayette, Jefferson, Lawrence, Marshall, Tuscaloosa, Walker, and Winston Counties, Alabama, on the maps in this entry.

- (2) Within these areas, the physical or biological features essential to the conservation of the Black Warrior waterdog consists of a riverine system with habitat to support all life-history stages of the Black Warrior waterdog, which consists of the

following components:

(i) Geomorphically stable, medium to large streams (typically 4 meters (m) (13 feet (ft)) wide or greater) with:

(A) Substrate consisting of clay or bedrock with little sand, and containing abundant rock crevices, rock slabs, and leaf packs;

(B) Moderate water velocity; and

(C) Prey base of aquatic macroinvertebrates.

(ii) Water that lacks harmful levels of pollutants, including inorganic contaminants such as copper, arsenic, mercury, and cadmium; organic contaminants such as human and animal waste products; endocrine-disrupting chemicals; pesticides; nitrogen, potassium, and phosphorus fertilizers; and petroleum distillates.

(iii) Appropriate water quality parameters to support Black Warrior waterdog and primary prey base, including:

(A) Water temperature not exceeding 85° F;

(B) Dissolved oxygen 5.5 milligrams per liter (mg/L) or greater;

(C) Turbidity of an average monthly reading of 15 nephelometric turbidity units (NTUs) above background readings;

(D) 115 mg/L of total suspended solids or less; and

(E) A specific conductance of no greater than 225 microsiemens (µS) per centimeter at 80 °F.

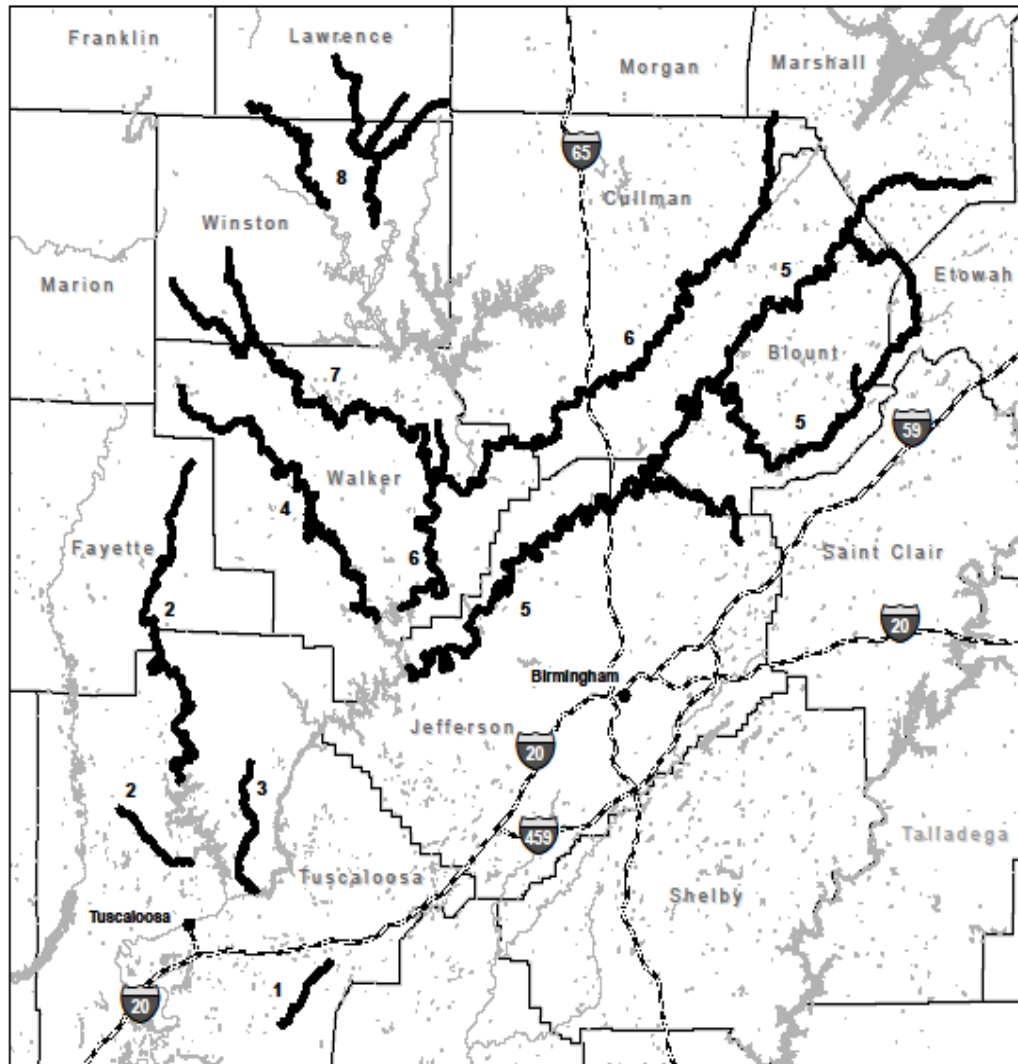
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) *Critical habitat map units.* Data layers defining map units were created from the USGS National Hydrography Datasets High Resolution Flowline layer using Universal Transverse Mercator (UTM) Zone 16N coordinates. Segments were mapped using 1983 UTM Zone 16 projection. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site at <http://www.fws.gov/daphne/>, at <http://www.regulations.gov> under Docket No. FWS-R4-ES-2016-0031, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the Service regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note:* Index map follows:

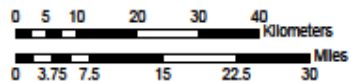
# Index Map of Critical Habitat Units for Black Warrior Waterdog

Blount, Cullman, Etowah, Fayette, Jefferson, Lawrence, Marshall, Tuscaloosa, Walker, and Winston Counties, Alabama



- Black Warrior Waterdog Critical Habitat Unit Number Labeled
- Interstates Highways
- Major Rivers
- Lakes & Ponds
- County Boundary

1:875,000



(6) Unit 1: Lye Branch.

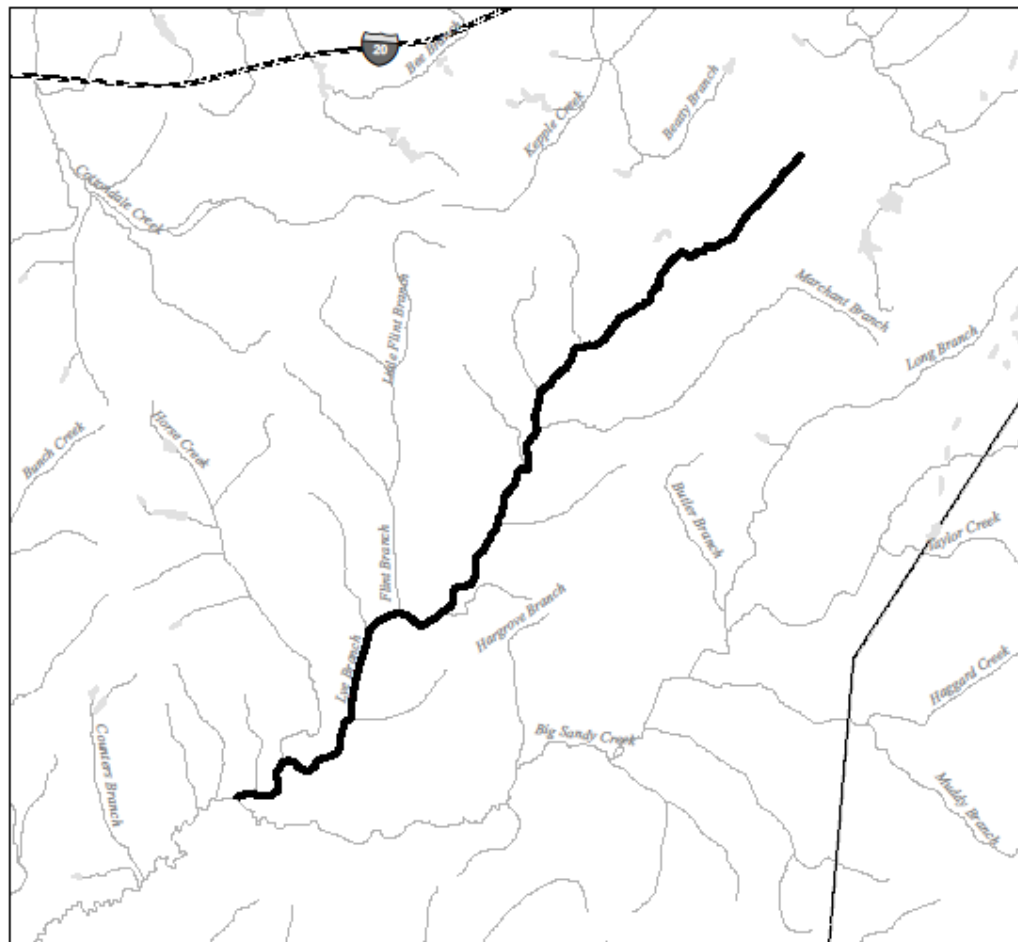
(i) *General description*: Unit 1 consists of approximately 16 river kilometers (rkm) (10 river miles (rmi)) of stream and river habitat from the headwaters of Lye Branch to the confluence of Big Sandy Creek.

(ii) Map of Unit 1 follows:



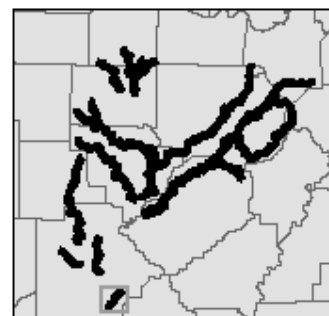
# Unit 1 Critical Habitat for Black Warrior Waterdog

Tuscaloosa County, Alabama



- Black Warrior Waterdog Critical Habitat
- Alabama Interstates
- Lakes & Ponds
- County Boundary
- Rivers & Streams

1:80,000

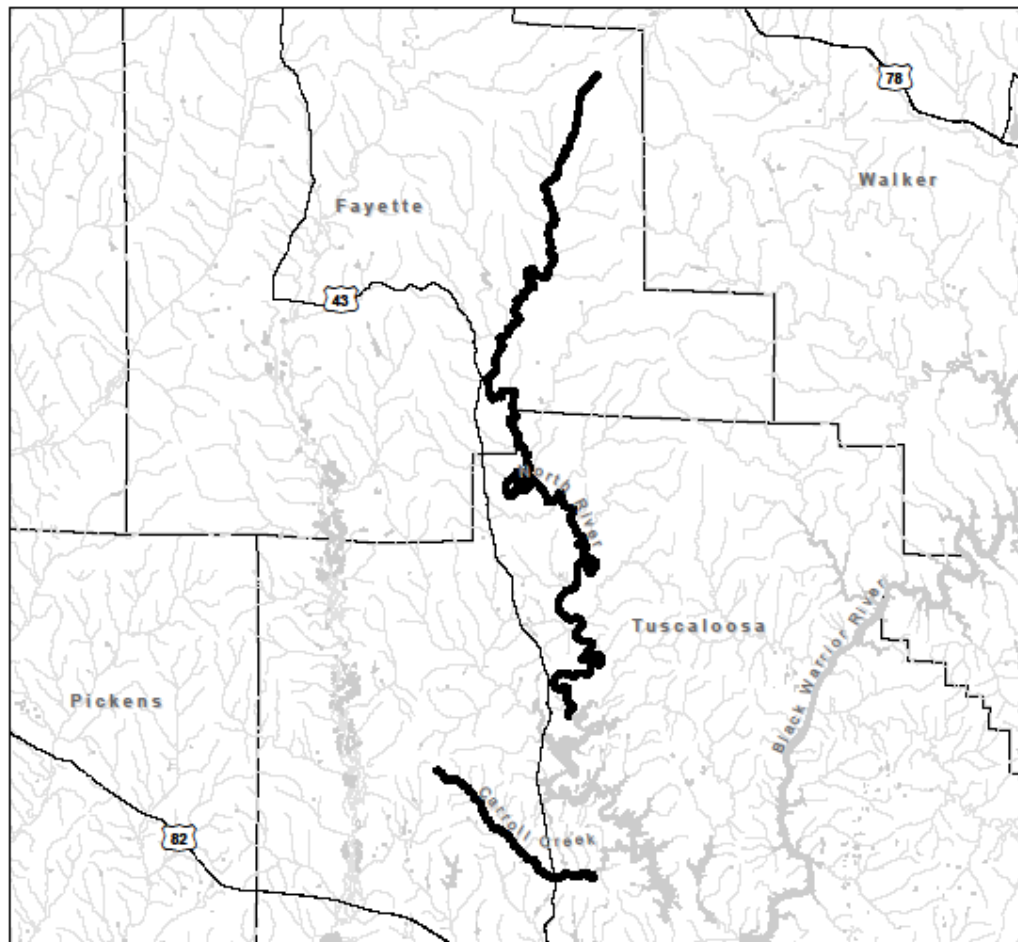


(7) Unit 2: Lake Tuscaloosa.

(i) *General description:* Unit 2 consists of approximately 108 rkm (67 rmi) of stream and river habitat from the headwaters of North River to Tuscaloosa Lake, and from the headwaters of Carroll Creek to Tuscaloosa Lake.

(ii) Map of Unit 2 follows:

Unit 2 Critical Habitat for  
Black Warrior Waterdog  
Fayette & Tuscaloosa Counties, Alabama



Black Warrior Waterdog Critical Habitat

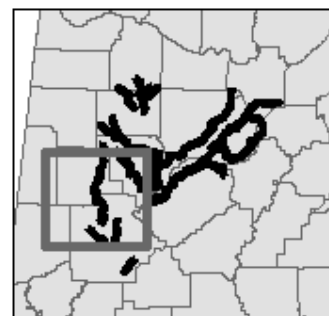
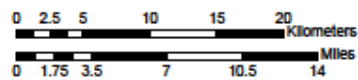
US Highways

Lakes & Ponds

Rivers & Streams

Alabama County Boundary

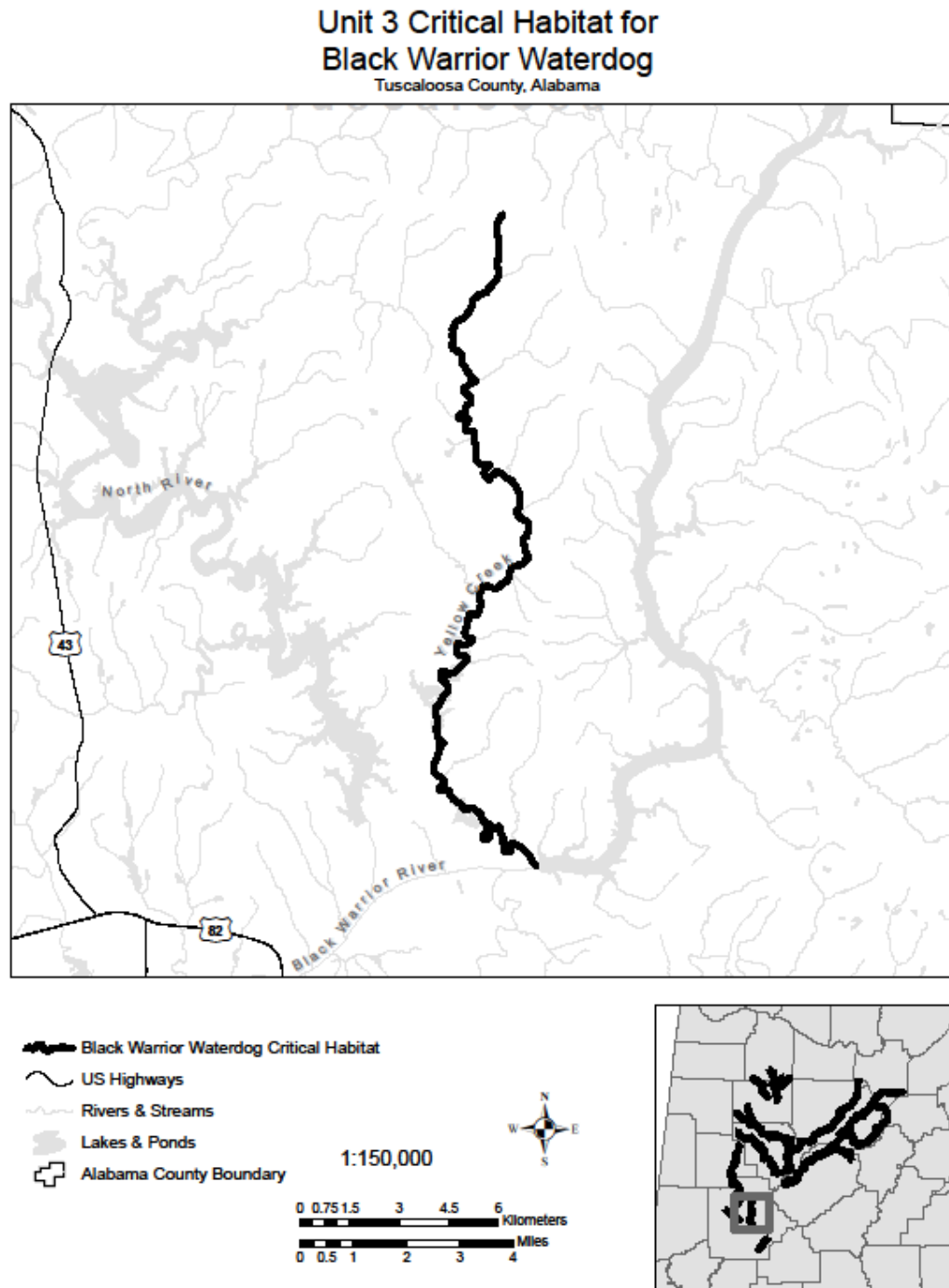
1:400,000



(8) Unit 3: Yellow Creek

(i) *General description:* Unit 3 is approximately 30 rkm (19 rmi) of stream and river habitat from the headwaters of Yellow Creek to Holt Lake.

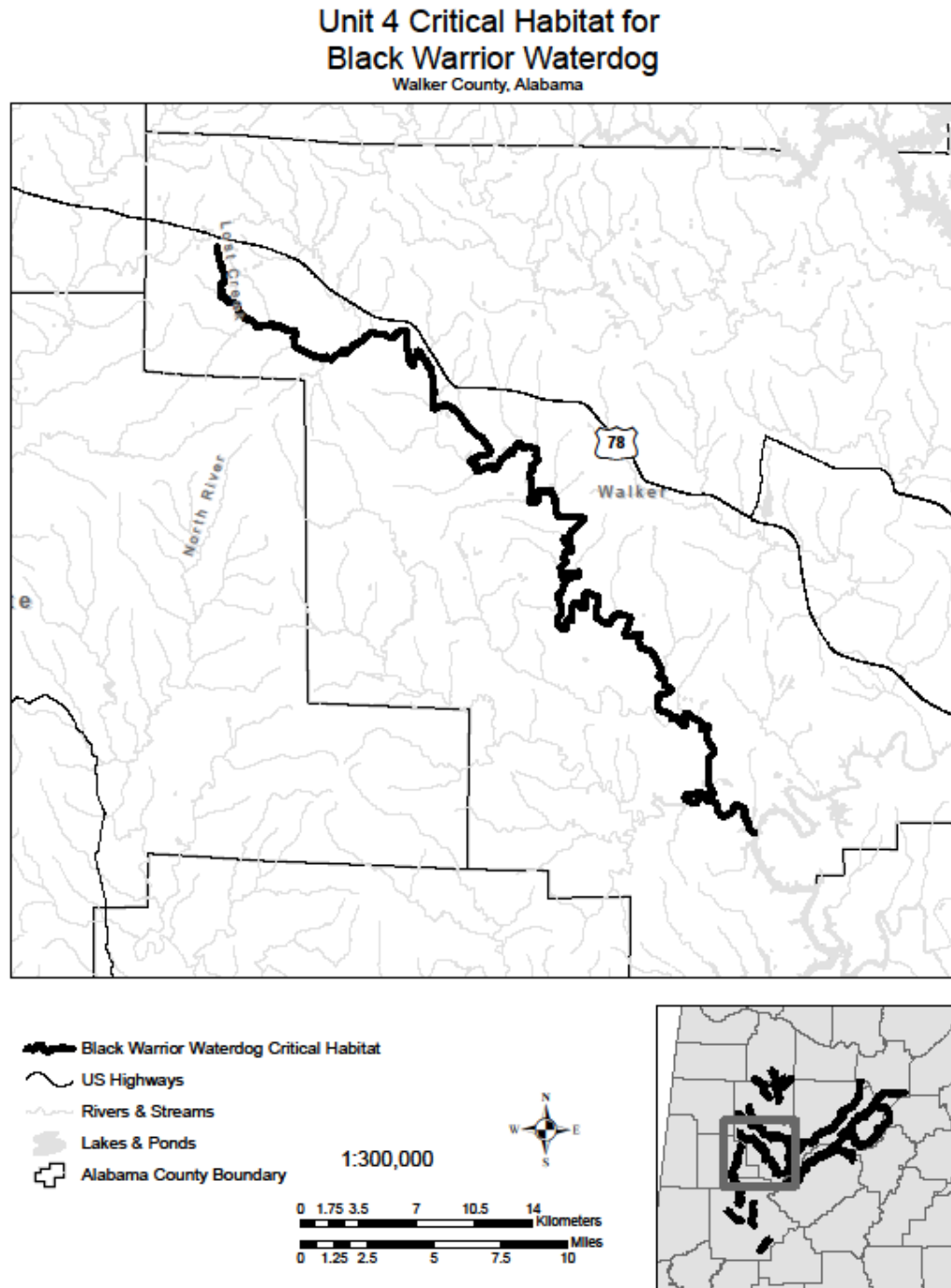
(ii) Map of Unit 3 follows:



(9) Unit 4: Lost Creek.

(i) *General description:* Unit 4 is approximately 93 rkm (58 rmi) of stream and river habitat from the headwaters of Lost Creek to Bankhead Lake.

(ii) Map of Unit 4 follows:

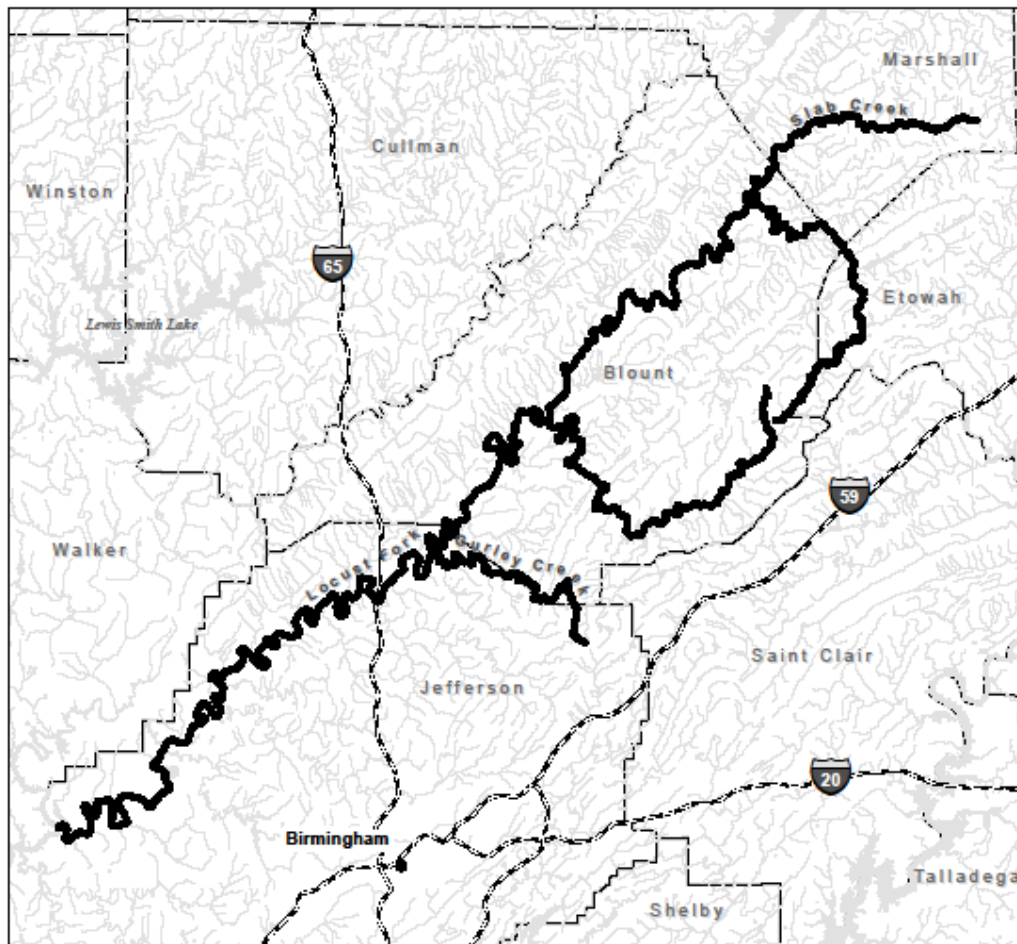


(10) Unit 5: Locust Fork.

(i) *General description:* Unit 5 is approximately 391 rkm (243 rmi) of stream and river habitat from the headwaters of Locust Fork to Bankhead Lake, from the headwaters of Slab Creek to the confluence of Locust Fork, from the headwaters of Blackburn Fork to the confluence of Locust Fork, and from the headwaters of Gurley Creek to the confluence of Locust Fork.

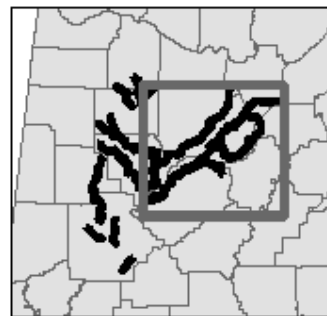
(ii) Map of Unit 5 follows:

**Unit 5 Critical Habitat for  
Black Warrior Waterdog**  
Blount, Etowah, Jefferson, and Marshall Counties, Alabama



- Black Warrior Waterdog Critical Habitat
- Interstate Highway
- Rivers & Streams
- Lakes & Ponds
- Alabama County Boundary

1:555,000

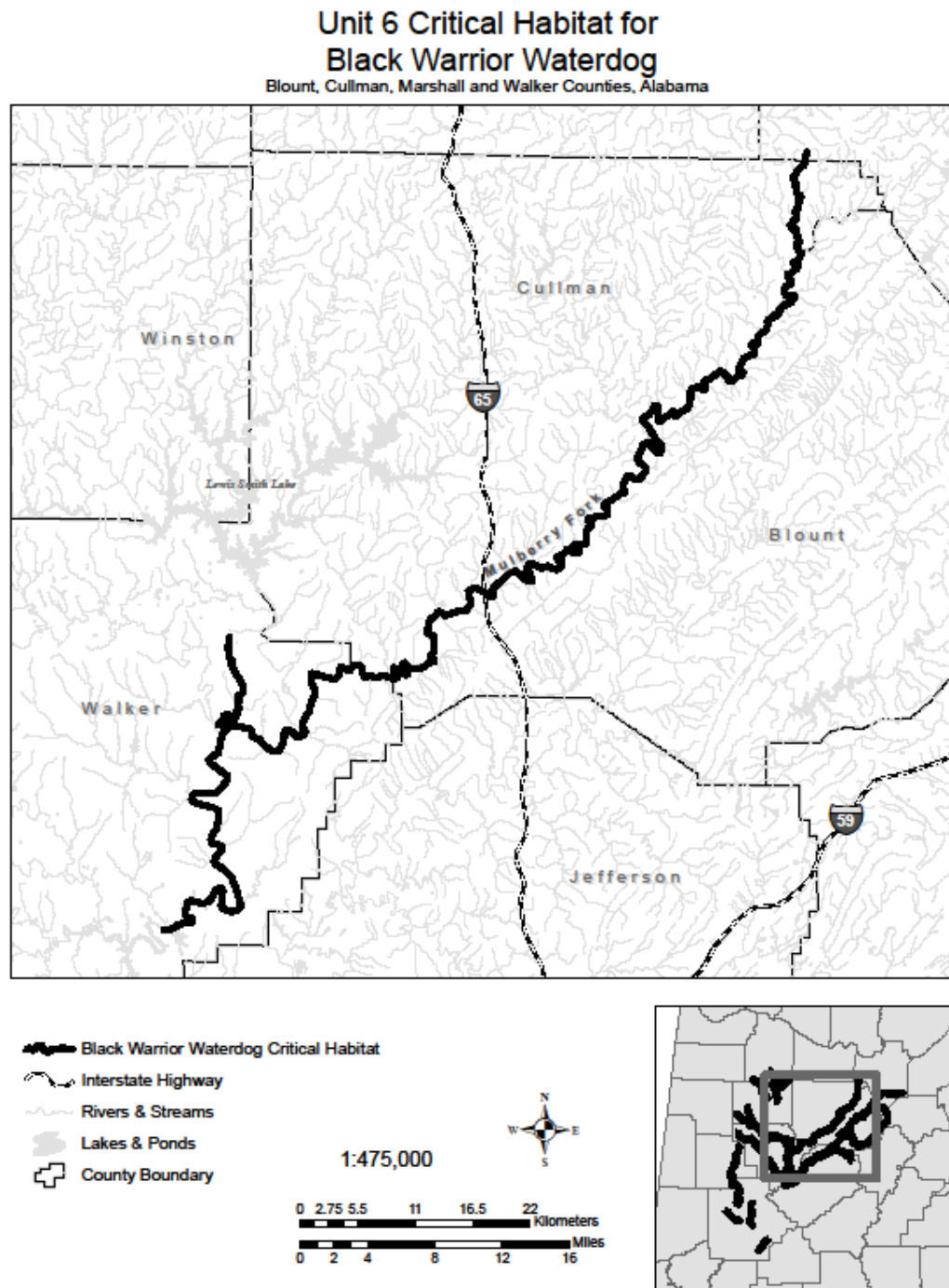


(11) Unit 6: Mulberry Fork.

(i) *General description:* Unit 6 consists of approximately 183 rkm (114 rmi) of

stream and river habitat from the headwaters of Mulberry Fork to Bankhead Lake, and from Little Blackwater Creek to the confluence of Blackwater Creek.

(ii) Map of Unit 6 follows:





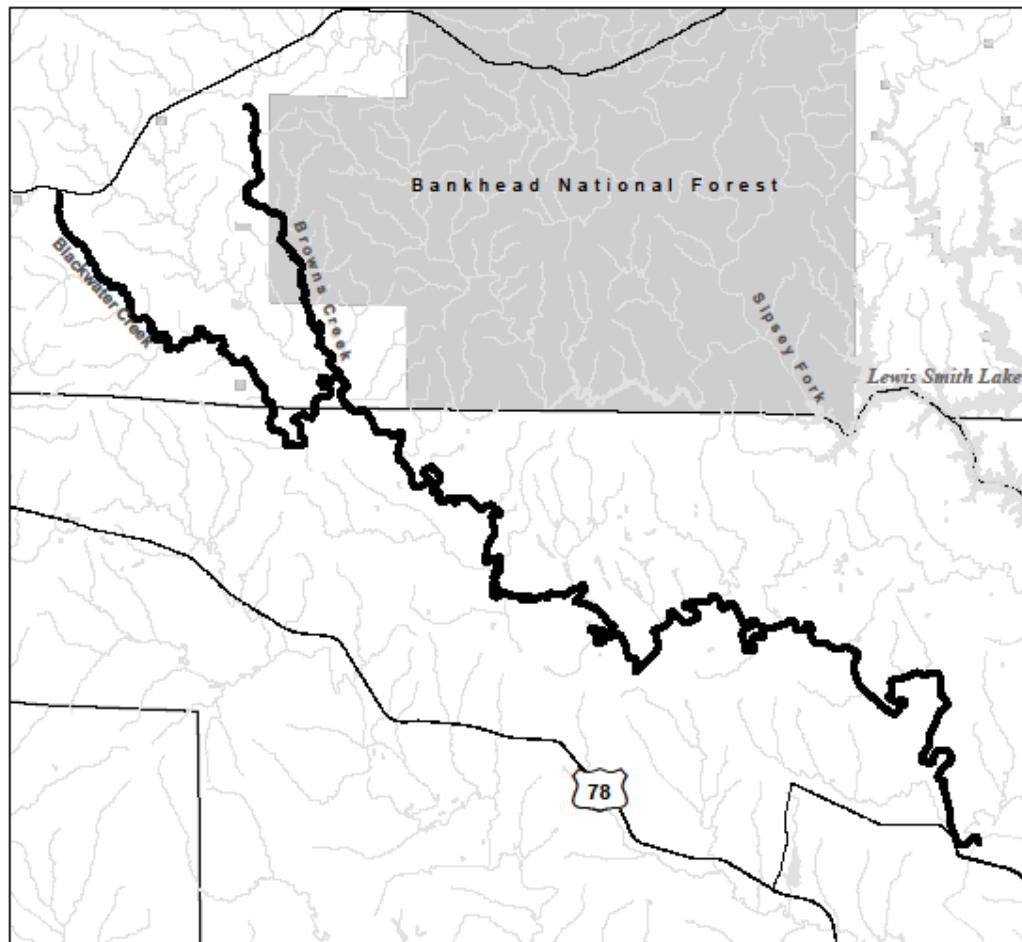
(12) Unit 7: Blackwater Creek/Browns Creek.

(i) *General description:* Unit 7 consists of approximately 128 rkm (80 rmi) of stream and river habitat from the headwaters of Blackwater Creek to the confluence of Mulberry Fork, from the headwaters of Brown Creek to the confluence of Blackwater Creek.

(ii) Map of Unit 7 follows:

# Unit 7 Critical Habitat for Black Warrior Waterdog

Winston and Walker Counties, Alabama



Black Warrior Waterdog Critical Habitat

Bankhead Forest Service District

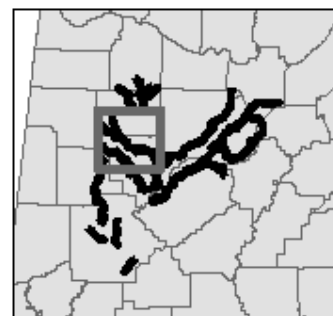
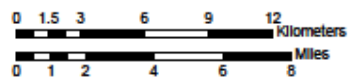
US Highways

Rivers & Streams

County Boundary

Lakes & Ponds

1:250,000



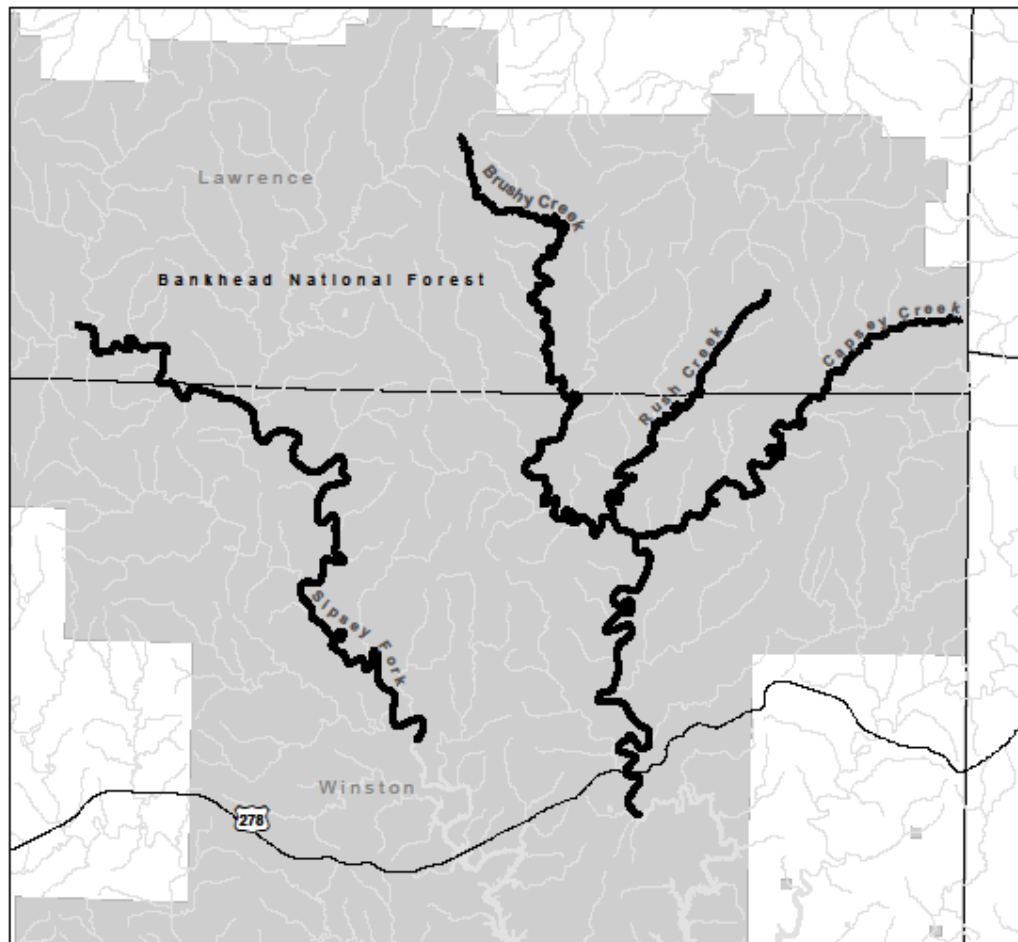
(13) Unit 8: Sipsey Fork.

(i) *General description:* Unit 8 consists of approximately 124 rkm (78 rmi) of stream and river habitat from the headwaters of Sipsey Fork to Lewis Smith Lake, from the headwaters of Brushy Creek to Lewis Smith Lake, from the headwaters of Rush Creek to the confluence of Brushy Creek, and from the headwaters of Capsey Creek to the confluence of Brushy Creek.

(ii) Map of Unit 8 follows:

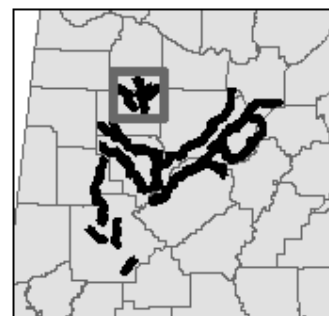
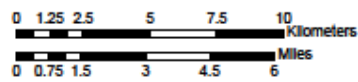
# Unit 8 Critical Habitat for Black Warrior Waterdog

Lawrence & Winston Counties, Alabama



- Black Warrior Waterdog Critical Habitat
- Bankhead Forest Service District
- US Highways
- Rivers & Streams
- County Boundary
- Lakes & Ponds

1:200,000



\* \* \* \* \*

Dated: Sep. 26, 2016

Signed: Karen Hyun

Acting Principal Deputy Assistant Secretary for Fish and Wildlife and Parks.

Billing Code 4333-15-P

[FR Doc. 2016-24118 Filed: 10/5/2016 8:45 am; Publication Date: 10/6/2016]